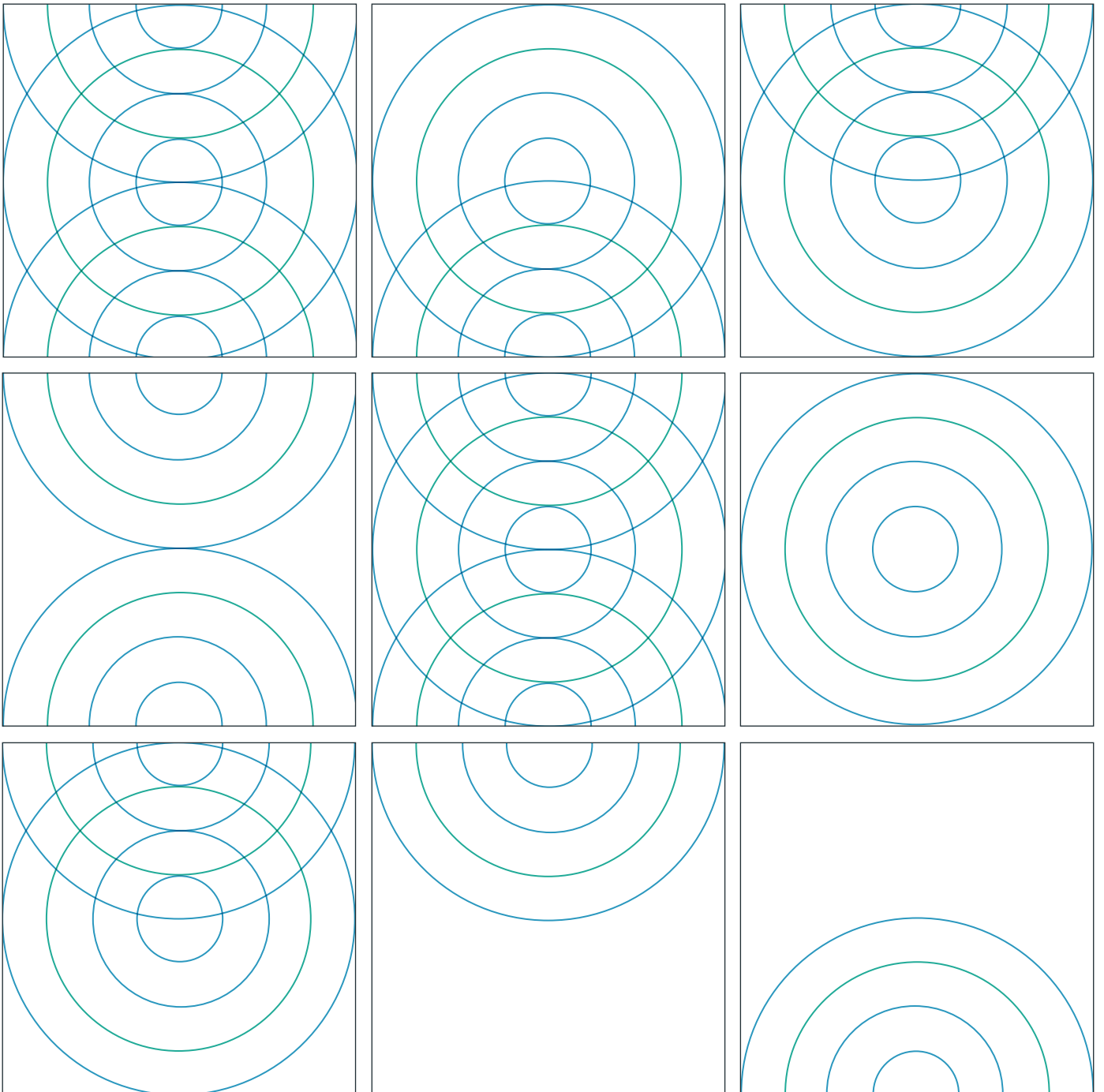


Living, Working, Playing with Water: exploring perceptions of water in the urban environment through creative practice





The Metropolitan
Glasgow Strategic
Drainage Partnership

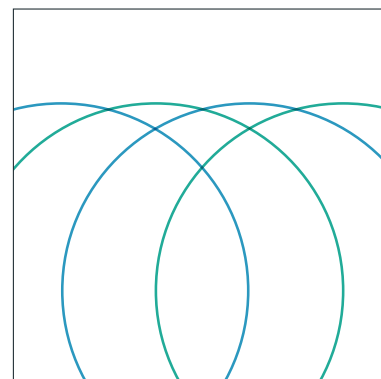


University
of Glasgow

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1. Glossary of key terms

**Open bodies of water**

Lakes, ponds, rivers, streams and other lying water that is not culverted.

Surface water

Water from rain/precipitation and run-off (from buildings, roofs and other hard surfaces).

Sustainable drainage systems (SuDS)

SuDS provide alternative, supplementary and more broadly beneficial ways of managing surface water from rain and run-off than traditional drainage systems (hard-surfaced gutters, drain pipes and drain holes). They typically use porous materials, such as turf and vegetation, as well as ponds and basins, to manage rainfall close to its source, absorbing water and slowing its movement. This reduces the quantity of water entering water treatment systems and mitigates flood risk. SuDS also frequently use 'natural' materials to filter impurities, which reduces the level of treatment required in water treatment facilities, and thus the costs of water treatment. SuDS can also function as areas of biodiversity and as local amenities. <http://www.susdrain.org/resources/ciria-guidance.html>

Surface water management systems/schemes

Both traditional drainage systems and sustainable drainage systems (SuDS).

Water management infrastructure

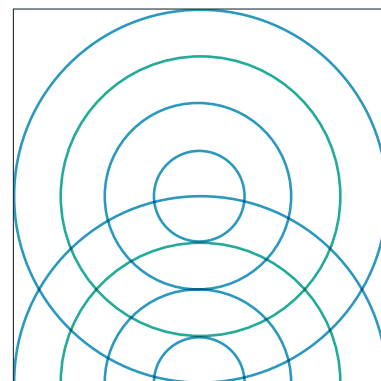
Surface water, waste (sewage) and drinking water management systems/schemes.



IMAGES:
L-R from top-left:
drain cover, Sighthill; permeable paving,
Dalmarnock; SuDS swale, Craigend; SuDS
swale, Dalmarnock; SuDS drain; Dalmarnock
(kerb); SuDS swale, Dalmarnock



2. Executive summary



2.i. Introduction

The systems, processes and infrastructure through which water is managed— particularly in drainage, waste water and drinking water schemes— are often incomprehensible and invisible to the general public, leading to gaps in knowledge about how water operates in our daily lives. This fosters ignorance, powerlessness and irresponsible practices, which are significant factors in escalating water-related environmental issues such as flooding, drought and pollution.

The pilot project, **Living, Working, Playing with Water**, used creative practice as a tool to address these gaps in knowledge— with a specific focus on sustainable drainage systems (SuDS) in Glasgow.

The decision to focus on SuDS was taken in response to recognition, amongst professionals working in surface water management and related areas in Glasgow, that there was room for improvement in the ways in which SuDS were integrated into some, largely residential, developments— particularly in terms of residents' perceptions of and interactions with SuDS.¹ Given that SuDS are mandatory in all new developments in Scotland, it was felt that gathering intelligence and testing new approaches in relation to this issue could have specific benefits in improving the design, construction and integration of SuDS, as well as wider applications in

addressing gaps in knowledge about water management infrastructure more generally.

2.ii. Summary aims

- 1/to gauge existing attitudes towards water in urban environments
- 2/to test the potential of playful, creative practice to address gaps in knowledge and to reconnect public and professional attitudes towards water
- 3/to develop a toolkit for engaging with publics² in the planning, design, construction, integration and maintenance of SuDS, and other water management infrastructure

2. Executive summary

The project was devised and delivered by artist-researchers Dr Minty Donald and Nick Millar, with Dr Ursula Lang, and in partnership with Glasgow City Council Development and Regeneration Services (GCC DRS) and the Metropolitan Glasgow Strategic Drainage Partnership (MGSDP). **Living, Working, Playing with Water** took place between August 2016 and March 2017.

The project focused on the relationship between professional surface water management practices and public perceptions of water in three areas in Glasgow. The areas were chosen as each is a new or recent development that features SuDS at a different stage of planning, construction and integration. The three areas also have varied topographies, different histories of development and land use and variations in the existing presence of water. The three case study areas were: Athlete's Village, Dalmarnock; Sighthill and Easterhouse.

Living, Working, Playing with Water used and extended methods and practices developed by Donald and Millar as part of their ongoing creative research into human-water inter-relations.

<http://donaldmillar2014.tumblr.com>

2.iii. Project structure

1. Informal interviews with professionals involved in surface water management and related areas
2. Preliminary research identifying the locations for three case studies
3. Fieldwork in each of the three selected case study locations
4. Door-to-door visits with residents in case study locations
5. Water-mapping activities in case study locations
6. Participatory workshops and discussions with residents in case study locations
7. Participatory workshop with professionals involved in surface water management and related areas
8. Reflection on findings and outcomes of the project— compilation of toolkit

2. Executive summary

2.iv. Summary of findings

Summary of findings on perceptions of open water

- **attitudes towards open water** varied and appeared to be dependent on 1/ the **location of the open water** 2/ the **nature and appearance of the water** 3/ **preconceptions and previous experience of interacting with water**
- the overarching perception was that **open bodies of water did not represent a major threat** to humans or animals
- the **appeal of open water bodies** seemed to be significantly **dependent on their appearance**
- perceptions of the **cleanliness** of open bodies of water also seemed to be dependent on **appearance, location and design**

IMAGES: L–R from top-left: pond, Auchinlea Park; SuDS pond, Dalmarnock; SuDS swale, Dalmarnock; SuDS pond, Easterhouse



2. Executive summary

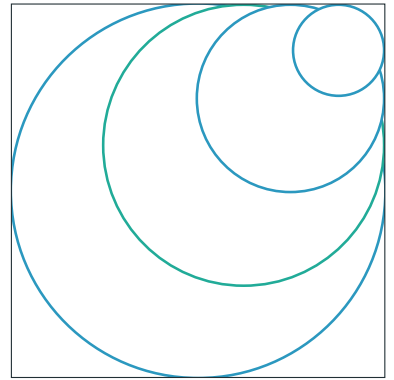
Summary of findings on potential of creative practice

- the creative, playful activities used in the **Living, Working, Playing with Water** project can play a valuable role at various stages and in several aspects of the planning, design, construction and integration of SuDS— and potentially in relation to other features of water management and built infrastructure

Living, Working, Playing with Water activities

- value **residents' knowledge and lived experience** of a neighbourhood
- help to **reveal small but significant variations in environmental and social conditions**, which can inform the design and planning process
- **encourage public engagement and discussion**
- function as **non-didactic, educational tools**, which are **inclusive and accessible**
- **break down expert/non-expert categories** and **promote shared, exploratory, improvisatory learning** between 'professionals' and 'publics'
- encourage **material and sensory interactions** with the **environment** and with the **design and construction process**— among both 'public' and 'professional' participants
- invite **publics and professionals** to have **pleasurable, sensual and poetic interactions with water** and other materials, which can influence the design and integration of SuDS and other features of the built environment
- **foster connections between publics and environmental features** through activities that help to **instil a sense of ownership and/or stewardship**
- help to **address public disengagement** with the design and construction process by **re-emphasising materiality and functionality**
- place emphasis on **design for use**, rather than focussing on the more superficial visual aspects of design
- make it evident that **the design process is subject to revision and alteration**
- can have a specific function in **educating publics about surface water management systems, water catchment areas and SuDS**
- help publics **understand the challenges of designing and constructing open waterbodies/SuDS, which are safe** for those living and working with them
- help the public **interact safely and pleasurably with water**, recognising the **benefits and risks** of living with water

3. Expanded Aims



- to **investigate perceptions of open water in urban environments** in Glasgow, with the intention of improving the design, construction and integration of surface water management schemes, and with a specific focus on sustainable drainage systems (SuDS)
- to test and reflect on **the potential of creative practice** (playful, sensory, interactive and imaginative activities with water and other materials) to
- to **develop a toolkit for engaging with publics** regarding the planning, design, construction, integration and maintenance of SuDS and other water management infrastructure

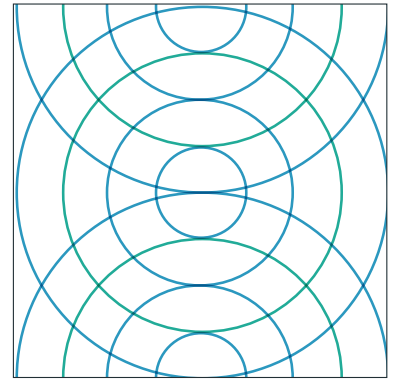
1/**gain insights** into popular and professional perceptions of open water in urban environments

2/**positively influence** the conception, realisation and integration of SuDS

3/**address gaps in knowledge** about the role of surface water management schemes and SuDS

4/**encourage communication** between professional organisations, individuals and publics in relation to surface water management issues

4. Origins and methodology



Instrumental and pragmatic interactions with water can dominate everyday professional and non-professional life. The leading concerns of professionals working in water management are practical ones, such as flood prevention, waste water disposal or provision of safe drinking water. Everyday encounters with water are often similarly functional— for instance, cooking or washing. As a means of exploring what is often missing in these interactions, the **Living, Working, Playing with Water** project drew on and expanded a creative research methodology developed by Donald and Millar, which they describe as ‘guddling’.³ The ‘guddling’ approach uses playful, participatory activities to encourage affective (sensory, emotional and aesthetic) interactions with water and the systems and infrastructures through which it circulates.⁴

[Guddle.
Scots. Verb.
1/ to act in an undirected and
instinctual way. To mess about.
2/ to catch fish by hand, feeling
under rocks and riverbanks
where they lurk]

The guddling approach is founded on attentiveness to the seemingly incidental. Its basis is in paying attention to the intimate textures and details of everyday life, where ‘meanings and values as they are

actively lived and felt’ can be discerned.⁵ It focuses on the ‘extreme local’⁶— the small, often overlooked features and behaviours peculiar to each location. This on-the-ground, affect-centred, approach is adopted as a way of addressing the incomprehension and sense of powerlessness many people experience in engaging with bureaucratic systems, over-arching ‘master’ plans, and ideologies. It is intended to help dissolve expert/non-expert categories and bridge professional/non-professional divides. It is an approach where flexibility and improvisation are valued alongside, and as counter to, grand-scale, long-term strategising.

In **Living, Working, Playing with Water** this approach took the form of:

- ‘hanging out’ in three neighbourhoods in Glasgow— observing details of the urban fabric and local behaviours relating to water and undertaking playful, accessible fieldwork activities
- adopting diverse communication strategies to reach a broad spectrum of residents in an attempt to move beyond the most prominent views and voices
- devising playful, accessible workshop activities that encouraged participation by experts and non-experts, breaking down ‘professional’ and ‘non-professional’ categories



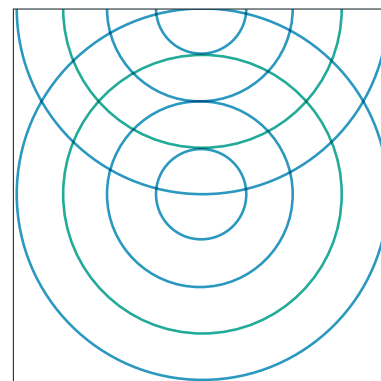
IMAGES:

L-R from top-left:

Guddling About, Calgary, Alberta, Canada;
Guddling About, Govan, Glasgow;
Guddling About, Calgary, Alberta; Guddling About,
Melbourne, Australia



5. Informal interviews with professionals involved in surface water management and related areas: aims and findings



Interviewees included architects, engineers, planners, property developers and environmentalists. In keeping with the guddling approach, interviews were conversational and relatively unstructured, allowing discussions to evolve fluidly.

Aims of the interviews were to:

- introduce **Living, Working, Playing with Water** to relevant professionals, with the intention of involving them at later stages of the project
- equip Donald and Millar, as non-experts, with a basic technical understanding of surface water management and SuDS, supplementary to what was learned through desk-based research and fieldwork
- provide Donald and Millar with specific information about surface water management and SuDS in Glasgow, to assist in selecting appropriate case study locations
- gather personal and professional experiences and opinions regarding open water and SuDS
- prompt discussion about personal and professional relationships and associations with water more generally.

The project was met with enthusiasm by all interviewees, who confirmed that there were issues regarding professional and public understanding of surface

water management and the integration of SuDS in Glasgow. Interviewees welcomed experimentation with an alternative, creative approach to exploring and addressing these issues. In the conversations multiple, and sometimes competing, viewpoints emerged, but also recurring themes and common opinions.

Recurring themes and common opinions:

- the potential of open water to contribute to a **sense of well-being**, and to provide opportunities for relaxation and recreation
- **water in motion** was considered **more appealing** than still water
- the benefits of **increasing public awareness of water**— e.g., through making visible its transformation(s) and journeys
- the importance of a **context-specific approach**, rather than general solutions
- the significance of **instilling a sense of ownership of water bodies** among local residents— perhaps through using local or locally-chosen names for waterbodies or engendering a sense of stewardship
- the need for greater public **awareness of the inter-connectedness of urban water infrastructure** and the wider water network

5. Informal interviews with professionals involved in surface water management and related areas: aims and findings

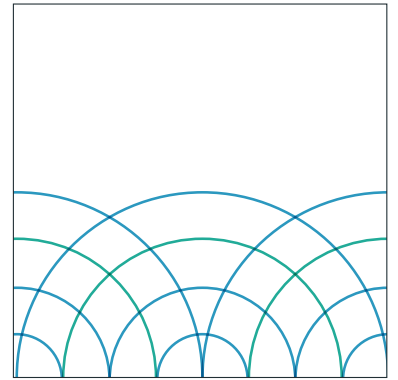
- the existence of **a range of attitudes towards open water**—perhaps attributable to people's different cultural and social backgrounds, the specific context of each body of open water, (e.g., whether the body of open water is 'existing' or 'new'), or precedents for open water in the area
 - **differing attitudes towards open water in different countries** (e.g., some countries in mainland, northern Europe, such as Denmark, Holland and Finland, tend to have more relaxed attitudes towards living in proximity to open water)
 - the importance of recognising that **water in SuDS is not 'clean'**. SuDS primary function is to retain and slow down water movement to
 - 1/ reduce the risk of flooding and
 - 2/ allow some decontamination through filtration. While SuDS may provide opportunities for relaxation and leisure, they are not designed as recreational ponds and will contain contaminated water from run-off, animal and plant waste
 - the need for more **integrated and long-term approaches to surface water management**—for publically and privately-funded bodies and different departments of organisations to work together, to not opt for the quickest and cheapest solution, and to follow through on the delivery of SuDS as initially designed
 - the need to **work with topography**—tendencies to 'lose topography in urban settings' and problems with 'forcing water where it doesn't want to go' were noted
 - the **significant contamination of land and ground water in Glasgow**, mostly a legacy of the city's industrial past.
- Contested issues:**
- responsibility for, and ease of, **maintenance** of SuDS. Opinions differed regarding the degree of responsibility which local authorities, water management organisations, housing associations, property developers and residents should take for the upkeep of SuDS, and about the extent to which the design of SuDS could contribute to their successful and efficient maintenance
 - **safety** of SuDS, particularly regarding their accessibility to children and animals. Viewpoints differed on the extent to which SuDS represented a danger to vulnerable groups and how this might be mitigated. Approaches included restricting public access entirely through perimeter fencing, using design features such as planting to minimise risk, giving consideration to the proximity and orientation of SuDS in relation to

5. Informal interviews with professionals involved in surface water management and related areas: aims and findings

residential properties to discourage unsupervised access, and educating members of the public about living safely with SuDS. The designation of SuDS as ‘workplaces’ under health and safety legislation and concerns about corporate liability further influences the implementation of safety measures around SuDS and their design.⁷

- promoting the **multiple uses and benefits** of SuDS— e.g., as amenities or wildlife habitats, as well as for flood mitigation, water purification and as drainage systems. Opinions differed on the extent to which SuDS could and should be promoted as amenities, due to the potential costs of doing so and health and safety issues concerning access to water in SuDS ponds, which may contain contaminants from run-off or other sources
- reconciling the **economic imperative** to maximise profit from property development with the provision of high quality environments. Perspectives varied on the benefits and disbenefits of building larger numbers of cheaper property units, and subsequently reducing the area available for SuDS/green space, versus building fewer units that were of higher value due to their having more extensive and attractive SuDS/green space
- the apportioning of **responsibility** for sustainable drainage to ‘authorities’ and/or ‘publics’. There were multiple opinions on the value of domestic-scale initiatives, such as rain butts and rain gardens, and the extent to which authorities or publics should be involved in the maintenance or stewardship of SuDS. ‘We’re all independently water-managers’
- points of view varied as to the extent of **access** publics should have to SuDS and open water
- opinions differed on the value of the **visibility** of water in urban environments. Arguments for daylighting culverted watercourses (‘making the water journey visible’) were countered by a recognition of public perceptions of risk, and other negative associations with water
- there were a range of perspectives on the importance of designing SuDS to have an **attractive appearance** versus the costs of doing so, over and above fulfilling basic statutory requirements. ‘There’s no statute for aesthetics’.

6. Case study locations



Sighthill^(a), Easterhouse^(b) and Athletes' Village, Dalmarnock^(c); Glasgow.

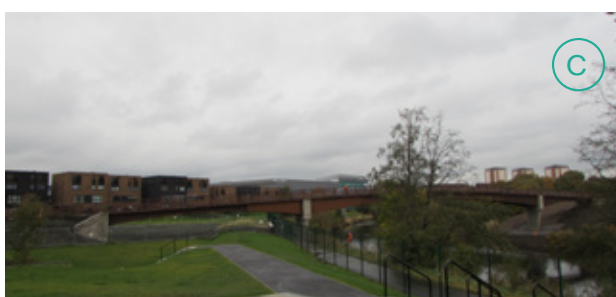


The three locations were chosen as they featured SuDS at different stages of their construction and integration: existing, established SuDS (Dalmarnock); SuDS under construction and at an advanced stage of planning (Sighthill); and an area in which SuDS were envisaged as part of a large development currently in the very early stages of planning (Easterhouse).

6. Case study locations

The topographies, including the presence of water in each area, were also varied. Each location has a different history of development and land use.

- The Athlete's Village in Dalmarnock^(c) is located close to the River Clyde on land which has not previously been developed for residential purposes. Some of the land was contaminated from previous industrial use and required extensive remediation before development began.
- Sighthill^(a) is an elevated location, with the Forth and Clyde Canal its most significant nearby water body—although the name for the current development, Fountainwell, suggests an earlier presence of water in the area. Significant residential development in Sighthill, mostly in the form of now-demolished high-rises, dates only from the 1960s. The soil here is also heavily contaminated through industrial pollution—frequent references to 'the stinky ocean' were made by residents. The land is currently undergoing remedial treatment, prior to development.
- Easterhouse^(b) is a more extensive location with less clearly defined neighbourhoods and communities.



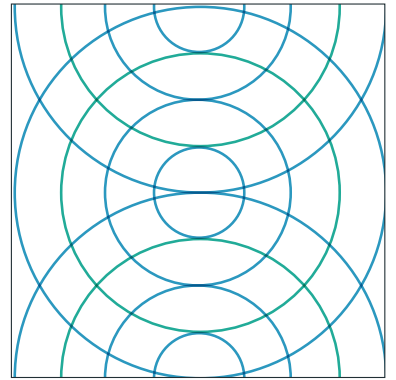
Living, Working, Playing with Water focused on an area near to the local shopping and arts centre where several watercourses have been culverted (e.g., the Whamflett Burn and Monklands Canal) and now run underground as part of the city's water network. The selected location in Easterhouse is also in close proximity to the area under development as the Seven Lochs Project. www.sevenlochs.org



IMAGES:
L-R from top-left:
Athletes' Village, Dalmarnock; Sighthill;
Sighthill; Easterhouse



7. Fieldwork: guddling activities, door-to-door visits and water-mapping



Guddling activities were intended to garner an understanding of water in the ‘extreme local’ and of everyday, lived experiences with water in each neighbourhood. The activities were also intended to make Donald, Millar and Lang visible in the neighbourhood and open them up to informal interactions with residents. The activities took the form of playful, repetitive actions with water carried out in public places in each neighbourhood— e.g., collecting water from puddles, or pumping water from drains.

Through **door-to-door visits**, Donald, Millar and Lang took a more direct approach to engaging residents in conversations about their perceptions of water in their neighbourhoods. The conversations were framed by a playful request— Donald, Millar and Lang invited everyone who opened their doors to ‘lend’ them a sample of water from their homes, explaining that it would become part of a water map of the area.

To conclude the fieldwork phase, the water samples ‘borrowed’ in each neighbourhood were used to create an interactive **water map** in a public space in each of the case study locations. The ‘borrowed’ water samples were laid out in a scaled-down approximation of their actual locations. The activity prompted questions and conversations with passers-by, who were invited to donate a water sample from their homes.



IMAGES:

L-R from top-left:

Water map, Athletes' Village, Dalmarnock;

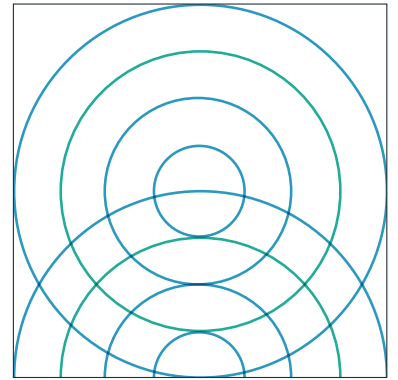
Fieldwork, Athletes' Village, Dalmarnock;

Puddle drain, Easterhouse; Water map,

Sighthill



8. Fieldwork: observations and reflections



Sighthill fieldwork observations and reflections:

- the major residential development/soil remediation project currently underway dominates the location
- people appeared unable to make a connection between the development/remediation work currently happening in the area and future plans
- temporary fencing surrounding housing in Sighthill cuts residents off from ready access to their local water body, the Forth and Clyde Canal, and leaves only one way in and out of the housing development
- there is currently an absence of open water bodies in the area
- several people mentioned the canal, playing with water in the waste ground (before remediation work began) and the smells and appearance of that water— ‘the stinky ocean’
- several people expressed concern about contamination in local water
- several people expressed anxiety and distrust of ‘authorities’
- many drains in Sighthill were dry
- the clustering of drains reflected the topography of the neighbourhood
- several people mentioned a large puddle, which gathered regularly in a particular spot

‘I don’t want none of that comin’ up here into our drains, d’y’know what I mean?’

We were ending our first afternoon at Sighthill, rounding a stretch of Fountainwell Drive across from the community center, where there were a lot of drains. We were using the pump to take samples from storm drains that had water in them. It was grey, on the verge of misting, but holding off. A man, in his early 40s maybe, came out from one of the new buildings to find out what we were up to, who we were. He wondered if we were scientists and if we were taking samples for testing, because he knew from years spent being a cabbie in the area, about contamination. And he was worried. He talked about steaming ground in winter, blue vapours, and incredible stench from standing water. He had a persistent way of talking, and he wanted us to hear him, to hear his concerns and his memories of the place. And he had a scepticism in his voice, ‘a bit of a conspiracy theorist’ he called himself.’ Lang, fieldnotes, November 2016

8. Fieldwork: observations and reflections

- many of the houses had small gardens, several of which had been paved
- there are planters in the area but most were unattended, with dead or dying plants
- there are a range of different materials covering the ground: asphalt, grass, paving
- many of the streets have the word Fountainwell in them but no-one knew where the name came from.

‘I covered it all over, the grass was that bad’

A woman came over to talk, as we stopped to take some water from a puddle across the street from her unit in a new row of houses. She said that the units were nice but cut corners, ‘they were threw up’. Then she said the grass they put in didn’t drain at all, was terrible, full of bottle caps and other detritus, that the dirt was trucked over from across the road near the cemetery, that it was so bad she was in the middle of paving over the front garden. She said to come by for coffee any time, and to enjoy mucking about in the puddles! Lang, fieldnotes, November 2016



IMAGES:
L-R from top-left:
Water pump, Sighthill; Water sample,
Sighthill; Drain, Athletes' Village,
Dalmarnock



8. Fieldwork: observations and reflections

Athletes' Village, Dalmarnock fieldwork observations and reflections:

- the Village borders the River Clyde, with a single or double fence separating the river from the housing
- there are several types of open water in the Village: ponds, basins and swales, some of which contained no, or very little, water and most of which had fences around them
- there was litter in some of the basins and ponds— a shopping trolley, a deflated football, plastic bottles
- there are very few conventional drains
- surface water on the streets drained quickly after a heavy rain shower
- the children's play area near the River Clyde was boggy
- in one part of the Village, the drains were filled with rubbish— plastic sweet wrappers and crisp bags, empty drinks cans, paper flyers
- the streets were largely devoid of pedestrians
- there is an absence of places for people to congregate
- many people said that they liked living near to the river
- there were differing opinions about the other water in the area

‘What are you doing? Is there a problem with the drains again?’

A woman, perhaps in her late 60s, approaches us when we are pumping drain water. We explain what we're doing. She's relieved, and no longer particularly interested, when she learns that we are not water engineers or here on 'official' business. Donald, fieldnotes, November 2016

‘I love this. That's what we need— art about water.’

A woman, probably in her 30s, on the way to the gym with her partner late on a Saturday morning, stops to talk to us. She helps us lay out the water containers for the water map of the Athletes' Village. ‘We need the basins and things here, otherwise it would all flood. Most people don't realise that’, she says. She takes an empty container and says that she will bring it back with a water sample from her house. Donald, fieldnotes, November 2016

‘I wish they'd take away these fences. I have to walk for miles to get to the river when I take my dog out. It's crazy when it's just across from my house’

A woman, perhaps in her 40s, with a house overlooking the River Clyde. Donald, fieldnotes, November 2016

8. Fieldwork: observations and reflections

‘I love watching the changes on the river— with the light and the wind. It looks different every day. I think we need the fences. I don’t mind as long as I can see the river’

A woman, perhaps in her 50s, with a house overlooking the River Clyde.
Donald, fieldnotes, November 2016

‘They should have more gates in the fence. It’s just over there but we have to walk away round there (pointing away from the river) when we go fishing.’

A man, in his 50s/60s, and his son, with a house overlooking the River Clyde. Donald, fieldnotes, November 2016

‘There’s nowhere for kids to play’

A man, maybe in his 40s. I point out the play area, near to his house, in a low-lying area near to the river. ‘Och, it’s no use— it’s always boggy and flooded’. Donald, fieldnotes, November 2016

‘Last year there were children playing round the pond. I miss that. I think it’s a shame they put the fence up round it.’

A woman, perhaps in her 40s/50s, with a house overlooking the SuDS pond.
Millar, fieldnotes, November 2016

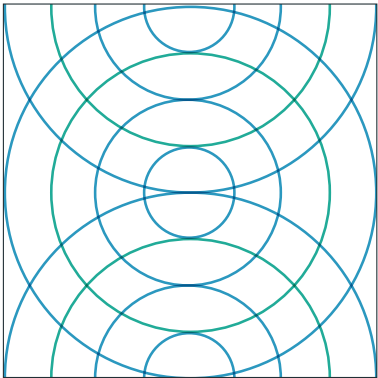
‘We bought this house because it was close to the swale. It’s nice to have the plants and wildlife’

A man, probably in his 30s, speaks knowledgably to me about the SuDS scheme. He tells me that he works as a water engineer. He lives in a house beside the swale. Donald, fieldnotes, November 2016

‘I don’t think they’re working properly, are they? They didn’t look like that in the pictures. They had water in them— not like ditches. And they didn’t have fences round them either’

A woman, maybe in her 50s, who lives near to the SuDS pond, tells me that she doesn’t understand what the empty basins and swales are doing. ‘They look ugly. And people throw stuff in them.’
Donald, fieldnotes, November 2016

9. Participatory workshops and discussions with local residents in case study locations



The open, inter-generational, drop-in workshops were focussed around a number of simple, playful activities with water— e.g., pouring water onto different surfaces and observing what happened; or classifying water through smell and appearance; or trying to build a container to hold water using earth, clay, twigs, sand and other materials.

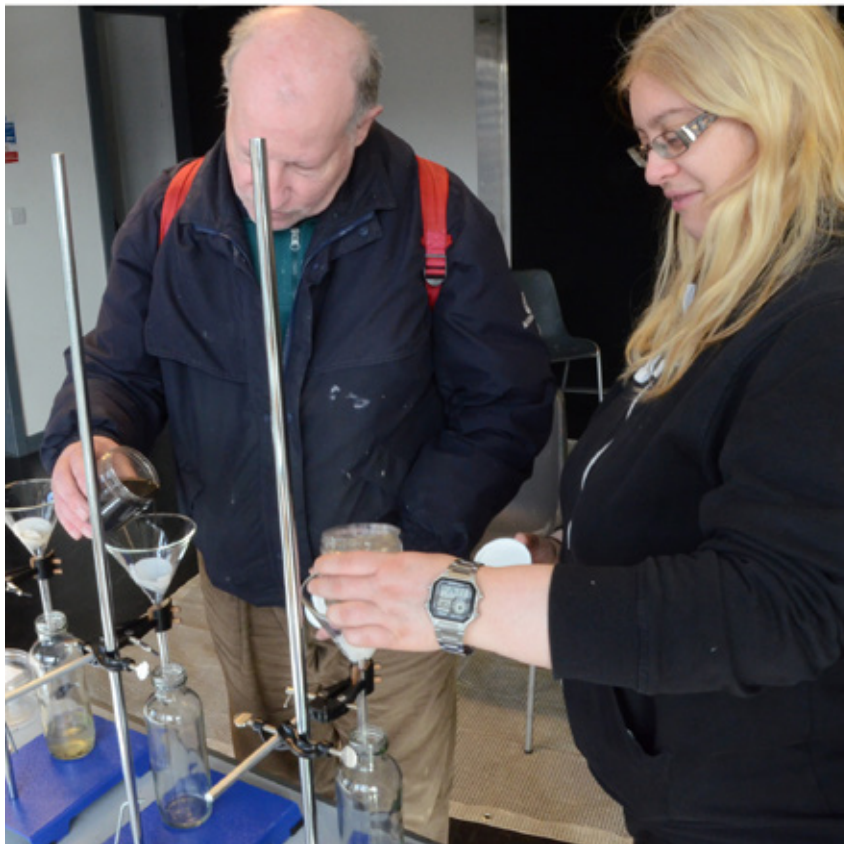
The activities were designed to encourage participants to interact directly with water and other related materials through touch, smell and sight. Through witnessing participants' behaviour and moods during these activities and participating themselves, Donald, Millar and Lang surmised aspects of participants' relationships with and attitudes towards water, which may not have been discernible through direct questioning or discussion. The activities provided opportunities for evidently pleasurable, tactile, sensory interactions with water— opportunities that were often absent in the case study neighbourhoods, e.g., in Sighthill, where residents currently have no ready access to water bodies or water features. The activities also acted as stimuli for conversations about water and the neighbourhoods.

Workshop venues and dates:

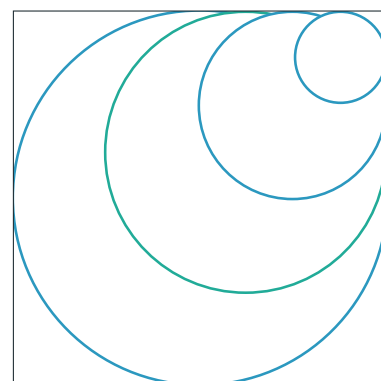
	Sighthill	Athletes' Village, Dalmarnock	Easterhouse
Venue	KATS Community Centre	The Legacy Hub	Platform, and surrounding area
Participants	8 children, ages 5 – 13, 5 adults	5 children ages 6 – 14, 6 adults	6 adults
Time	Saturday, 21 January 2017 10.30am – 1.30pm	Saturday, 28 January 2017 1 – 4pm	Friday, 18 February, 2017 10am – 12noon



IMAGES:
L-R from top-left:
Sighthill, absorption; Water smell,
Easterhouse; Water filter, Easterhouse; Flow,
Dalmarnock



10. Participatory, drop-in workshops and discussions: observations and reflections



Sighthill, Dalmarnock and Easterhouse workshops observations and reflections:

- children and young adults participated enthusiastically, with no sign of concern about dirtying themselves or their clothing
- interacting with water in a playful, uninhibited way appeared to be a new and enjoyable experience for many of the children and young adults— several confirmed that they had not previously had opportunities to play with water in this way
- in some of the activities there was a sense of wildness, abandon and joy, with the children and young adults engrossed in moving and pouring increasing amounts of water, at increasing speed
- in other activities, children and adults became absorbed and worked calmly, with concentration and co-operation
- several children appeared mesmerised by the moving water
- in several activities, children and adults improvised creatively— changing and adding elements to the tasks in response to the way the materials behaved— e.g., introducing floating objects ('Pooh sticks') into the moving water and setting up a system for recycling water, to keep the activities going
- children and adults were concerned with the aesthetics, as much as the functionality, of the water containers and other structures that they made, adding decorative and 'unnecessary' elements
- several people were reluctant to smell the water samples, expecting them to have unpleasant odours
- there was surprise that the samples that looked most 'dirty' were not always the ones with the worst smell
- adults and children were eager to experiment with different materials, noting how they interacted with water
- adults appeared content to engage in the activities, enjoying the playfulness and without judgement of their 'pointlessness'
- the idea of 'borrowing' water stimulated discussion about relationships between people and water in different cultures
- the tasks encouraged children and adults to talk about water in their neighbourhoods. They reflected on where water gathered, how it moved and dispersed in relation to different surfaces, and about how the water in their neighbourhood was connected to a wider water network. They expressed concerns and opinions about the cleanliness of water, the appearance and attractiveness of different types of water, and access to bodies of water. They talked about their own recreational interactions with water
- the children and young adults were reluctant to stop the tasks and leave at the end of the workshop



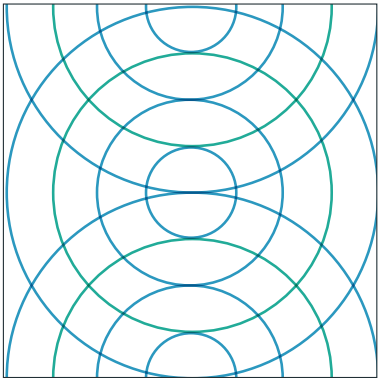
IMAGES:

L-R from top-left:

Puddle drain, Easterhouse; Flow,
Dalmarnock; Containment, Sighthill; Flow,
Easterhouse;



11. Participatory workshop with professionals involved in surface water management and other related areas



Participants in the final **Living, Working, Playing with Water** workshop were invited professionals: planners, engineers, environmentalists, architects and property developers. The workshop was more structured than the drop-in public sessions, with a sequence of planned activities followed by a discussion. Information and materials from the previous public workshops was also on display.

Workshop venue and date:

Easterhouse	
Venue	Platform
Participants	8 adults
Time	22 March 2017, 9.30am – 1pm

Workshop activities:

- **water circle** warm-up/introductory activity. Participants passed water around a circle in their cupped hands, trying not to spill any water
- **build-your-own-drainage-system** group activity. Three teams of participants were asked to build a drainage system using materials provided (turf, gravel, sand, clay, sticks, twigs, etc.) which would then be connected into a central water body (a length of guttering draining into a bucket). Each team was given a different context: residential, commercial or mixed development. The teams were provided with a list of questions and issues to consider when designing/constructing their drainage systems. Once they had been built, they were asked to give a name to their drainage system.

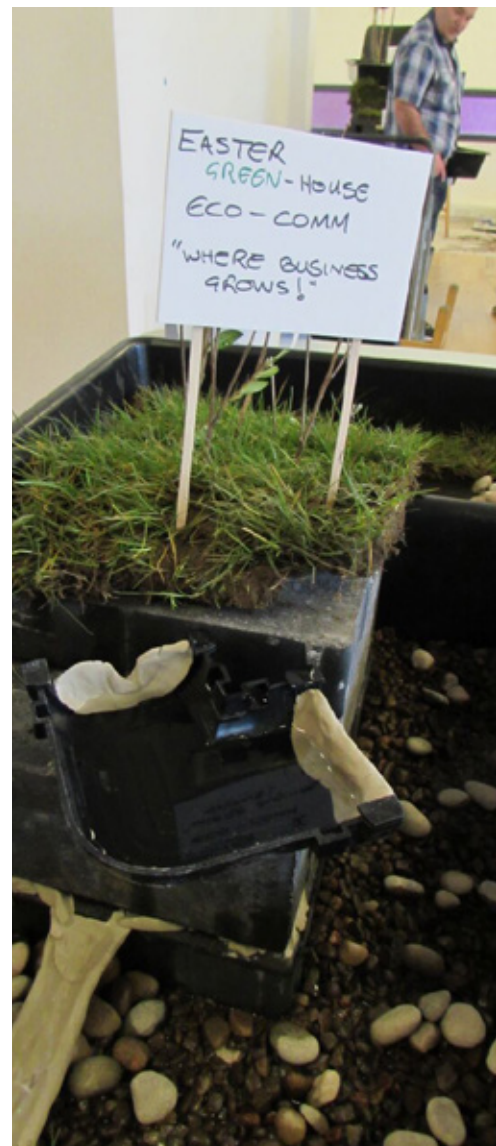




IMAGES:

L-R from top-left:

Build your own drainage system, workshop with professionals; Build your own drainage system, workshop with professionals; Build your own drainage system, workshop with professionals; Water signs, workshop with professionals



12. Workshops with professionals working in surface water management and related areas: observations and reflections

Warm-up/introductory task (water circle) observations and reflections:

- participants engaged readily in the task and did not appear to question its 'pointlessness'
- they appeared to take pleasure in it
- they appeared very intent in trying to preserve the water and mildly frustrated as it escaped through their fingers
- there appeared to be a sense of co-operation between participants
- participants observed that the water heated up through contact with their hands
- some participants commented that the water warmed through contact with hands felt less 'clean' and less attractive to touch than the colder water straight from the bucket
- participants commented that the activity made them feel close to, or even part of, the water
- they observed that they had felt the need to preserve as much water as possible and felt slightly deflated when all the water had drained from their fingers
- they commented that it was difficult to determine a precise moment when all the water had drained away, as their hands were still wet

Main task (build-your-own-drainage-system) observations and reflections:

- the participants became readily absorbed in the activity and appeared to find it enjoyable
- the participants worked co-operatively, and did not appear to be constrained by or adhere to 'professional' roles and boundaries
- each of the three groups took very different approaches and created very different structures
- in all three designs, aesthetics appeared to be a significant consideration
- some designs were more driven by functionality than others
- the decision-making processes that shaped the designs appeared to be led by the capabilities or characteristics of the materials and by the limitations and restrictions in the type and quantity of material available
- groups improvised and adapted their designs when materials and structures did not behave as anticipated
- there appeared to be a sense of excitement and pleasure when the water drained into the central guttering 'river' and a sense of joy in watching running water
- each of the three groups showed playfulness, inventiveness and thoughtfulness in naming their drainage systems

12. Workshops with professionals working in surface water management and related areas: observations and reflections

Post-activity discussion observations and reflections:

The **build-your-own-drainage-system** activity was recognised as valuable in educating people about

1/drainage systems and wider water infrastructure

2/the design and planning process

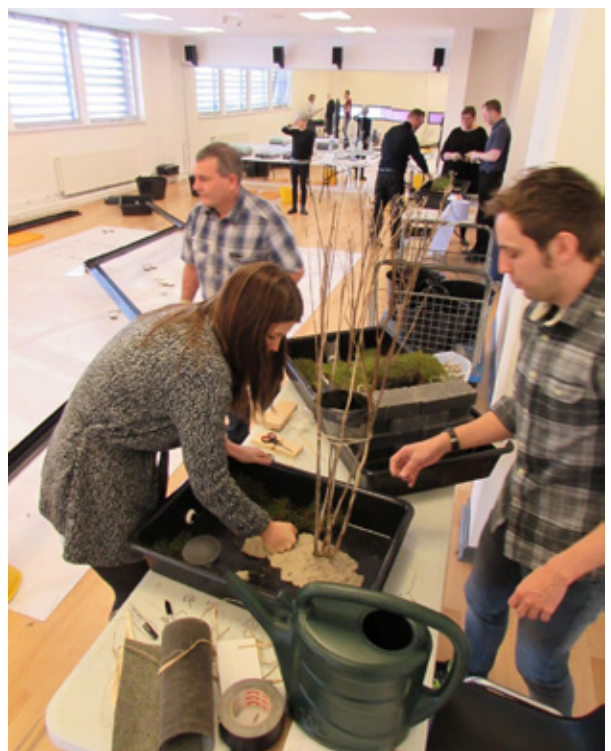
The activity:

- emphasised functionality in a playful and appealing way— moving the focus from what a drainage system looks like to what it does. ‘A more enriched way of engaging people’
- revealed the importance of adaptability in the design and planning process— the inevitability that plans will change, and that locations are not static, but are always evolving
- revealed that the design and planning process is iterative and not linear. It involves compromise and back-and-forth discussions. There is no single, ideal solution
- was recognised as a potentially valuable tool for addressing the lack of engagement with and understanding of paper or digital plans and drawings often experienced by publics
- had the potential to address a perceived disconnection between planning visualisations, diagrams and models and the sensory, material, three-dimensional processes of design and construction
- engaged with design as a hands-on, tactile and messy activity, foregrounding sensory perceptions of water and other materials
- provided opportunities for playful and joyful interactions with water—which could be carried through to ‘real life’ plans and situations (e.g., by including elements that invited interaction in water features or SuDS)
- stimulated thinking about the interconnectedness of water, water infrastructure and links between existing bodies of water
- had potential to dissolve professional and non-professional categories, with no-one working as an expert or within a particular specialism
- appeared to foster co-operation between participants
- revealed and accepted fallibility and human error

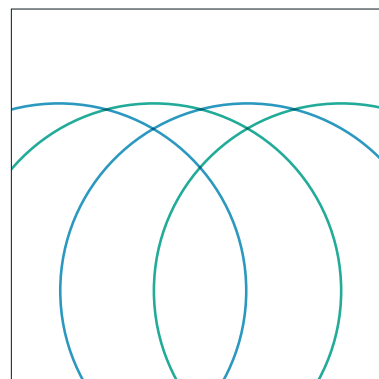


12. Workshops with professionals working in surface water management and related areas: observations and reflections

- this type of workshop activity might be most productive and appropriate as a means of engaging residents, helping to inform them and encouraging discussion at an early stage in the planning process— as a ‘neutral’ activity. At later stages in the planning process, community engagement is more concerned with persuading people to subscribe to a particular point of view or scheme. Later in the process, the potential to make changes decreases, the stakes for local people are raised and there is more emotional investment
- this type of activity could be valuable as a means of introducing people to the basic principles of surface water management, increasing their awareness of the wider water network and making aspects of the design process more transparent
- the activity had removed several ‘real life’ factors and potential impediments to the design process— e.g., there were no budget restrictions, and the reality of negotiating conflicting opinions, interests and imperatives in the design and construction process was absent. Removing these factors in the activity was seen as potentially valuable to both publics and professionals— to enrich and expand understandings fairly early in the process
- the activity might be extended to include some of these ‘real life’ factors by introducing a role-play element, with people adopting different positions, and/or a game element, with rules and instructions presenting obstacles or conundrums. This additional layer to the activity might be valuable in demystifying the diverse and competing interests, opinions and prerogatives that impact on planning and construction processes



13. Expanded Findings



Summary of findings on perceptions of open water

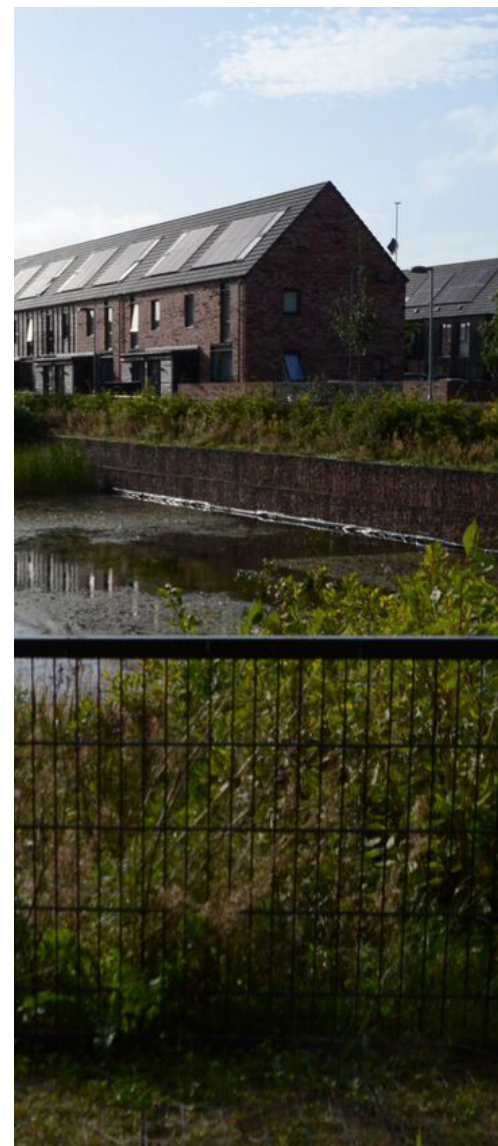
- **attitudes towards open water** showed some variation and appeared to be dependent on 1/ the **location of the open water** (e.g., proximity to housing and play areas) 2/ the **nature and appearance of the water** (e.g., rivers, recreational or 'natural' ponds, SuDS), 3/ **preconceptions and previous experience of interacting with water** (e.g., people who regularly interacted with water through leisure or work activities were generally more aware of the risks and content to take personal responsibility for behaviour and safety)
- open water bodies were generally not seen as presenting a significant danger to humans or animals. There was some concern over unsupervised children and pets living or playing in close proximity to open water, and some desire for barriers to prevent this, but the general sense was that **open water did not represent a major threat**
- the **appeal of open water bodies** seems to be significantly **dependent on their appearance**. Generally, the more popular water bodies were '**natural-looking**', rather than apparently human-made; **established**, such as rivers and ponds, rather than new; **litter-free** and apparently **clean**. **Water in motion**, and **water which visibly changed** in different conditions, was generally viewed as more attractive than still, inert water
- perceptions of the **cleanliness** of open bodies of water also seemed dependent on **appearance, location and design**. 'Natural-looking' water bodies, whether SuDS, rivers or pre-existing ponds, were generally seen as cleaner than those that were evidently human-made. SuDS which did not contain water (and which often contained litter) tended to be viewed as dirty, as did puddles and other areas where surface water pooled.



IMAGES:

L-R from top-left:

SuDS pond, Athletes' Village, Dalmarnock;
SuDS pond, Easterhouse; SuDS swale,
Craigend; SuDS swale, Athletes' Village,
Dalmarnock



13. Expanded Findings

Summary of findings on potential of creative practice

The types of creative, playful activities employed in the **Living, Working, Playing with Water** project can play a valuable role at various stages and in several aspects of the planning, design, construction, integration and maintenance of SuDS— and potentially in relation to other features of water management and built infrastructure.

Research and development (pre-planning)

Living, Working, Playing with Water activities

- encourage a granular approach, an **attentiveness to the 'extreme local'**, which values **residents' knowledge and lived experience** of a neighbourhood. They can help to **reveal small but significant variations in environmental and social conditions**, which can inform the design and planning process
- **encourage public engagement and discussion**. They can function as **non-didactic, educational tools** which are **inclusive and accessible**
- have the potential to **break down expert/non-expert categories** and to promote **shared, exploratory, improvisatory learning** between 'professionals' and 'publics' through their strategic use of playfulness and foolishness
- can have a specific function in **educating publics about surface water management systems, water catchment areas and SuDS** – including benefits, risks and safety issues in terms of design, construction, maintenance and public interaction
- encourage **material and sensory interactions** with the **environment** and with the **design and construction process**— among both 'public' and 'professional' participants
- invite **publics and professionals** to have **pleasurable, sensual and poetic interactions with water** and other materials. These can feed into **'real life' design solutions** and influence the design and integration of SuDS and other features of water management infrastructure and the built environment.

13. Expanded Findings

Design, planning and delivery

Living, Working, Playing with Water activities

- place emphasis on **design for use** and have the potential to educate publics and professionals about the **aesthetics of functionality**, rather than focussing on the more superficial visual aspects of design
- can help to **address public disconnection** with and incomprehension of paper/digital plans and drawings. They can improve public engagement with the design and construction process by **re-emphasising materiality and functionality**
- can make evident the **improvisatory and iterative nature of the design process**—that it is not a linear process, but subject to revision and alteration
- have the potential to help publics **understand the challenges of designing and constructing open waterbodies/SuDS that are safe** for those living and working with them.

Integration and legacy/maintenance

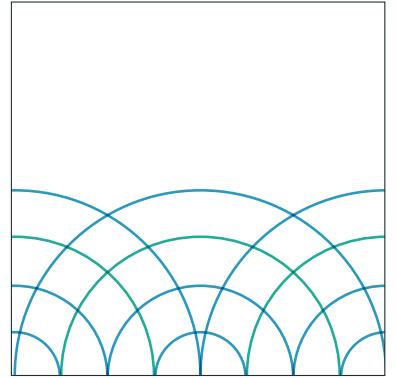
Living, Working, Playing with Water activities

- have the potential to **foster connections between publics and environmental features** (e.g., SuDS) through activities that help to instil a sense of ownership and/or stewardship. E.g., through creative naming activities or activities that encourage regular engagement with water (monitoring water levels, quality or appearance; interacting with the dynamics of water)
- have the potential to help publics **interact safely and pleasurably with water**, recognising the **benefits, and risks, of living with water**
- have the potential to help publics **understand the challenges of operating and maintaining open waterbodies/SuDS safely**

Living, Working, Playing with Water and the accompanying workshop materials could be used widely and further developed to support community learning about urban water issues and to enhance communication between ‘professionals’ and ‘publics’ regarding water in the built environment. They could be employed as tools for addressing disconnections between ‘professional’ approaches to water management and ‘public’ relationships with water in everyday life, society and culture.

TOOL KIT

14. Toolkit

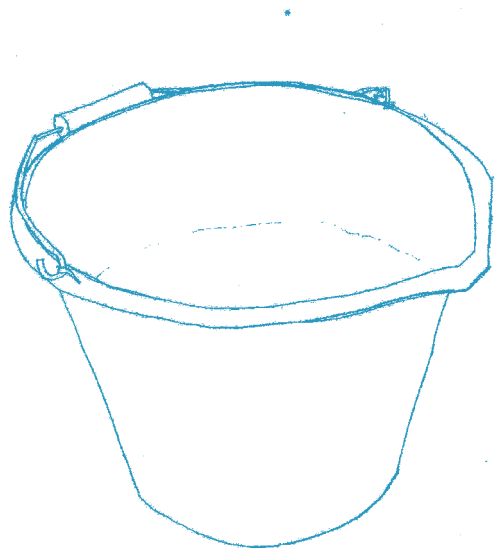


14.i. Suggested use and overview of activities

The **toolkit** proposes ways in which creative practice—the **Living, Working, Playing with Water** approach—might be applied to supplement and enhance the ways that SuDS and other water infrastructure systems are planned, designed, constructed, integrated and maintained. The **toolkit** proposes ways in which creative practice might be used during different phases of a project: research, surveying, pre-planning, design, community engagement, construction, integration and legacy.

While the suggested activities detailed below can be adapted and used at different stages in the process of planning, designing, constructing and maintaining SuDS and other water infrastructure systems they may be most fruitful applied as early in a project's lifecycle as possible. Gauging public perceptions and local knowledge of open water bodies and addressing gaps in understanding about water management and the design process at the start of a project offer opportunities for this knowledge to inform the project's development, and to enable meaningful public engagement and empowerment.

Documentation of activities and findings is recommended to ensure wider dissemination of the knowledge generated and to allow the activities and findings to remain accessible for future consultation and application.



14. Toolkit

Pre-planning/site research

Simple, playful, creative practices can be used productively, alongside other forms of site surveying, research and fieldwork, to

- gauge residents' existing perceptions of and relationships with water in their neighbourhoods, including attitudes to risk and safety
- enhance professional and public understanding of how water behaves at a local, intimate level
- help to integrate local knowledge into the design process
- build awareness and a sense of ownership of SuDS and other water infrastructure systems among residents

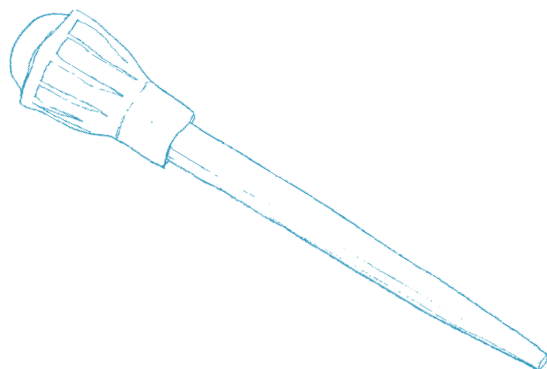
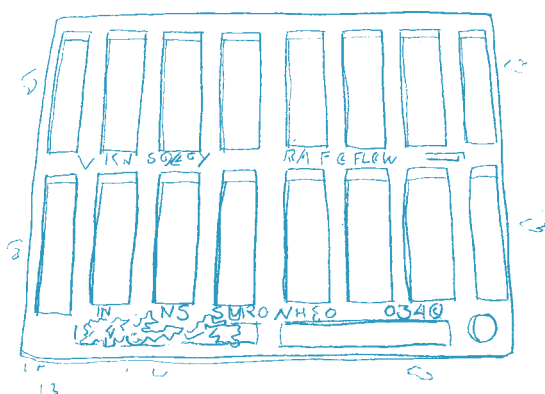
Activities may be carried out by professionals as fieldwork or research exercises and/or as participatory activities with local publics. Activities can be carried out in local community centres or similar venues, or on site and outdoors.



14. Toolkit

Suggested activities:

- ◎ **water map:** note and record the presence of water in a neighbourhood— in puddles, drains, outflows, ponds— and collect samples of the different types of water
- ◎ **puddle drain:** remove water from puddles using a water dropper or similar instrument and collect water samples
- ◎ **drain pump:** use a hand pump to draw water from drains and collect water samples
- ◎ **water smell:** smell the different samples of water and try to describe their odour
- ◎ **water colour:** describe and classify the water samples, depending on their colour
- ◎ **water filter:** pour water samples into a filter cone lined with filter paper and examine the residue
- ◎ **water pour:** pour water onto different surfaces (grass, tarmac, earth) and observe how it behaves: where it flows, how fast it flows, how quickly it is absorbed
- ◎ **drift:** place a small, biodegradable object in a body of moving water and watch what happens.



14. Toolkit

Design and Construction

Simple, playful, creative practices can be effective in

- demystifying the design process for non-professionals
- helping non-professionals understand water management systems and water infrastructure
- raising awareness of the extended water network among non-professionals
- breaking down professional/non-professional divides
- enhancing communication between professionals and publics during the construction of SuDS and other water infrastructure systems
- maintaining a connection between the conceptual design (paper or digital plans and visualisations) and material construction of SuDS and other water infrastructure systems
- growing public interest in and enthusiasm for SuDS and other water infrastructure systems
- instilling a sense of ownership, empowerment and a desire for stewardship of SuDS and other water infrastructure systems among residents
- addressing gaps in knowledge about the perceived risks and safety issues associated with SuDS, both for publics living with SuDS/open water bodies and professionals responsible for building and maintaining them

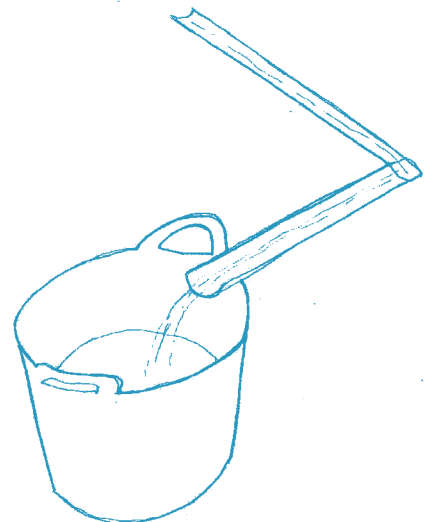
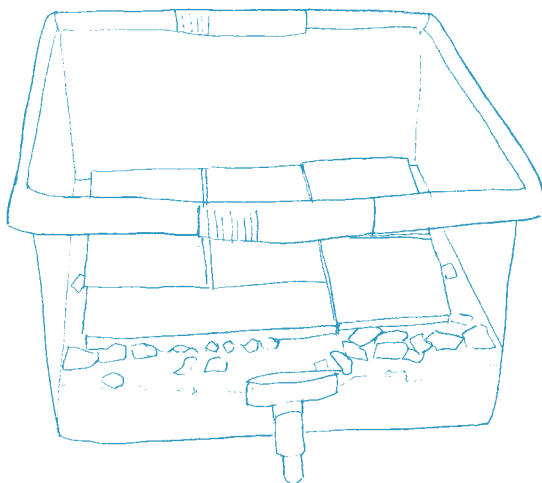
These workshop activities are intended as participatory activities, with local publics and professionals. Activities can be carried out in local community centres or similar venues, or adapted for use on site and outdoors.



14. Toolkit

Suggested activities:

- ◎ **absorption:** pour water onto different, prepared materials— e.g., grass, tarmac, gravel, soil— and observe how it behaves. How quickly is it absorbed? How much does it spread over the surface of the material? Does the material mingle with the water?
- ◎ **containment:** build a container which will hold water using a range of materials— e.g., soil, gravel, clay, twigs. Pour water into the container. Which materials hold water and which do not? How does the water interact with different materials?
- ◎ **flow:** build a structure from plastic guttering or similar materials. Prop the guttering at different heights to create a network of interconnected water channels. Pour water into the water channels and observe how it behaves. Experiment with different heights and different quantities of water.
- ◎ **build-your-own drainage system:** using a selection of materials— e.g., gravel, twigs, clay, sand, soil, turf— build a model structure/system that allows water to move from a given starting point to a shared destination.



14. Toolkit

Integration/maintenance/legacy

Simple, playful, creative practices can be effective in

- instilling a sense of stewardship of SuDS and other water infrastructure systems in publics
- growing awareness of the benefits and risks of living with water for both publics and professionals responsible for building and maintaining open water bodies
- enabling people to live and work pleasurably and safely with water

These are intended as longer term activities, which may involve the integration of more permanent creative and playful features into the design and use of SuDS and other water infrastructure.



14. Toolkit

Suggested activities:

- ◎ **water naming:** invent names for existing and new bodies of water in the neighbourhood. Why have you chosen this name? What does it say about your relationship with the water? What might it tell other people about the water? Is the name permanent or might it change? Can the name be displayed beside or as part of the body of water?
- ◎ **water signs:** write a sign which tells people something about a body of water in the neighbourhood. What kind of sign is it? Informative? A warning sign? Poetic? Can the name be displayed beside or as part of the body of water?
- ◎ **water levels:** install a measuring pole in a body of water which allows you to see how the water level rises and falls. Monitor the water levels over a period of time
- ◎ **moving water:** install a device, structure or feature as part of a SuDS or other water infrastructure scheme which encourages people to interact with water in motion
- ◎ **group and individual discussion:** all the above activities can also stimulate informal and formal, individual and group-based, discussion which can gauge existing attitudes to water in the urban environment and address gaps in knowledge about the design and functions, benefits and risks of SuDS and other water infrastructure systems



14. Toolkit

14.ii Detailed instructions and equipment

Workshop task #1: water map

Equipment:

Water borrowed from neighbourhood in labelled containers

Map of neighbourhood showing locations from which water was borrowed

Large vinyl floor mat with map of neighbourhood printed onto it

Instructions:

Using the map of the area provided, place the water samples onto the large vinyl floor map in the positions where it was borrowed. Can you find where you live? What water is near to your house? Do you notice any patterns in the way that the water is distributed?

Workshop task #2: water smell

Equipment:

water borrowed from neighbourhood in labelled containers

sheet of paper

pencils

Instructions:

Choose choose as many samples of water as you wish. Remove the lid from one of the samples. Close your eyes and smell the water sample. Try to describe how the water smells in one word. You can record the word on the sheet of paper provided. Repeat for each sample. Remember to wash your hands after you have finished.

14. Toolkit

Workshop task #3: water colour

Equipment:

water borrowed from neighbourhood in labelled containers
sheet of paper
pencils

Instructions:

Choose as many water samples as you wish. Line up the samples according to the colour of the water. You might order them from light to dark, or put similar colours together. What do you notice? Which water do you think is 'cleanest'? Try to describe the colour of the water in each bottle in a few words. You can record this on the sheet of paper provided. Remember to wash your hands after you have finished.

Workshop task #4: water filter

Equipment:

water borrowed from neighbourhood in labelled containers
glass funnels in retort stands
filter papers
bottles
sheet of paper
pencils

Instructions:

Choose choose as many samples of water as you wish. Describe what the water looks like. Set up a funnel lined with filter paper over an empty bottle to catch the filtered water. Pour the water sample through the filter. What does the water leave behind? How does the filter paper smell? What colour is the filter paper? What texture is the material left on the filter paper? Try to describe the colour of the filtered water. Try to describe the smell of the filtered water. You can record this on the sheet of paper provided. Remember to wash your hands after you have finished.

14. Toolkit

Workshop task #5: absorption

Equipment:

clear plastic boxes, fitted with a tap and lined with different materials (turf, gravel, earth, sand, concrete paving slab, etc.)

water

watering can or water jug

buckets (for catching outflow)

Instructions:

This activity involves materials often found in urban landscapes. How do these different materials absorb water? How does water move through these different materials? There are several plastic boxes, each containing a different material. Measure some water into a jug or watering can and carefully pour the water onto one of the materials in the plastic box. Watch what happens. Does the water disappear into the material or does it spread over the surface of the material? How quickly is it absorbed? What traces does the water leave behind? How long do these traces last? Does the water drain through the material or run off the material? Does it stay absorbed in the material or drain into the plastic box? Can you encourage one of the materials to absorb more water? Try pouring the water in different ways— fast, slow, dumped in one spot, or spread over the surface. What happens? Take a bucket and collect any water that has gathered in the box using the tap at the front. What does the water you have collected look like? Is it clear? How much water is there? Remember to wash your hands when you have finished

14. Toolkit

Workshop task #6: containment

Equipment:

large plastic tray

selection of building materials (e.g., earth, sand, gravel, turf, twigs, leaves, clay, etc.)

Instructions:

Can you build a container to hold water? Use any combination of materials to build a container that will hold water. Use materials provided, or gather your own from your neighbourhood. How quickly or slowly does water escape your container? Where does it escape? Why? Remember to wash your hands when you have finished.

Workshop task #7: flow

Equipment:

Approximately twenty metres of plastic guttering, in one, two and three-metre lengths

plastic joints for guttering (to join lengths at different angles)

bricks and small sections of plank (to adjust height of guttering)

water

watering can or jug

bucket to collect water

Instructions:

How does water move? Where does water go? Adjust the gradients of the guttering track using the bricks and sections of plank to prop it up. Carefully pour water into the guttering track and watch where it goes. Try pouring different amounts of water, pouring fast and slow, and changing the gradients of the track. What do you notice about the speed of the water? Where does the water escape or overflow?

14. Toolkit

Workshop task #8: Water circle

Equipment:

bucket filled with tap water

Instructions:

Stand in a circle. One person, scoop water from the bucket in cupped hands. Pass the water to the person next to you, trying not to spill any. This person repeats the action with the person next to them, and so on around the circle until the water runs out.

Workshop task #9: Build-your-own drainage system

Equipment/materials:

Approximately twenty metres of guttering in one, two and three-metre lengths

two/three-metre section of wider gauge guttering (for combined outflow)

different building materials (e.g., earth, turf, gravel, concrete/monoblock, wire, clay, mesh, twigs/wood, sand, etc.)

bricks and timber sections (to adjust heights)

plastic trays with tap/outlet (for construction of local drainage system)

watering cans

blank name signs

Instructions:

Working in groups and using the materials provided, build a model structure/system that allows water to move from a given starting point to a shared destination: a guttering 'river' or shared outflow that can catch all the water. Each starting point is described as a different kind of location— e.g. residential, commercial, mixed use, and has different features, such as elevation and a different selection of materials. Each group is given a set of questions to consider when building their drainage system.

14. Toolkit

Questions for workshop participants:

- **Where does the water come from?**
 - E.g., is it rain water, falling from the sky? Or water that has run off the streets?
- **How much water is there?**
 - Does the amount of water vary?
- **Who or what is likely to be near to the water?**
 - How might they interact with it?
 - Are there opportunities for playful or pleasurable interactions?
 - How might different living things—humans and nonhumans—interact with the water?
 - Are their issues of safety or other concerns?
- **How do you make choices about the materials to use?**
 - How important is the appearance of the materials? E.g., are they 'pretty'? are they fitting for the location? Do you want to make them a special feature?
 - How important is their function? E.g., will they slow down the water flow? Will they allow the water to spread out? Will they filter any residue that is contained in the water, or add residue?
- **How do you make choices about the way the structure and materials are interconnected and arranged?**
 - What height are different parts of the structure/system?
 - Are there points where water might pool and flood?
 - How quickly or slowly do you think the water will move at different times and in different parts of the system/structure?
- **Naming and signage**
 - In your group, think of a name for your structure/system. Write this on the blank sign provided.
 - Why did you choose that name?
 - What do you want it to communicate?
 - Who is the name for? E.g., the designer of the system/structure? Or the people living or working near it?
 - Compare the names of different groups
 - Do you need or want to add any more signage to your system? Is there any information or warning that you think you need to communicate to people living or working near the structure/system?

14. Toolkit

Task #10: Water pour

Equipment

watering can or jug

water

Instructions

Pour water onto different surfaces. Observe how it behaves, where it flows etc. Try this task in different weather conditions and in different locations.

Task #11: Drift

Equipment

small, biodegradable object. E.g., a blade of grass, twig or leaf

moving water

Instructions

Place a small object in a body of moving water and watch what happens. Make sure that the object is biodegradable. E.g., a leaf or small twig

Task #12: Water name

Equipment

paper

pencils

weather-proof signs or other forms of 'permanent' lettering

Instructions

Invent names for existing and new bodies of water in the neighbourhood. Why have you chosen this name? What does it say about your relationship with the water? What might it tell other people about the water? Is the name permanent or might it change? Can the name be displayed beside or as part of the body of water?

14. Toolkit

Task #13: Water signs

Equipment

paper

pencils

weather-proof signs or other forms of 'permanent' lettering

Instructions

Write a sign, or signs, which tell people something about a body of water in the neighbourhood. What kind of sign is it? Informative? A warning sign? Poetic? Can the name be displayed beside or as part of the body of water?

Task #14: Water levels

Equipment

Pole made from wood or other water-resistant material, which can be marked or which has markings on it

Instructions

Install a measuring pole in a body of water which allows you to see how the water level rises and falls. Monitor the water levels over a period of time

Task #15: Moving water

Instructions

Install a device, structure or feature as part of a SuDS or other water infrastructure system, which encourages people to interact with water in motion.

Notes and Acknowledgements

1. E.g., residents' questioning the safety of living in proximity to SuDS ponds has led to perimeter fencing being retrofitted. SuDS basins, which are by design sometimes filled with water and sometimes dry, have become sites for fly-tipping and accumulated litter.
2. The word 'publics' has been used throughout this report to suggest that 'the public' consists of multiple individuals and groups of people with diverse and changing viewpoints, experiences and needs, who form different configurations in different situations. There is no singular, unified or fixed 'public'.
3. Donald and Millar initiated this approach during a residency with the Utilities and Environmental Protection Department (Water Services) in Calgary, Alberta, in 2013. It has been developed in subsequent projects in Scotland, Germany, Spain, Australia and Finland.
4. In its focus on affect, the guddling approach aligns with current practice and scholarship in applied or socially-engaged arts/creative practice, sociology and geography. James Thompson, e.g., identifies and advocates for a shift from the instrumental (what creative practice can do in terms of 'identifiable social outcomes, messages or impacts') to the affective (the ability of art/creative practice to elicit 'bodily responses, sensations and aesthetic pleasures'). Inducing affect as an end in itself is recognised as valuable, particularly in situations where opportunities for pleasure, joy, playfulness and beauty are limited. But inducing affect can also create conditions where participants are more fully absorbed, contemplative and inquisitive. 'Stimulation of affect is what compels the participant to thought and to be engaged at every level.' James Thompson, *Performance Affects: applied theatre and the end of effect*, Palgrave Macmillan: Basingstoke and New York, 2011, pp. 6., 7., 125.
5. Other advocates of affect, e.g., anthropologist Kathleen Stewart, propose that focusing on affect enables us to discern the particularities of lived experience. Stewart cites Raymond Williams' influential concept, 'structures of feeling', to argue for attentiveness to what she calls 'ordinary affects', rather than over-arching political and ideological systems. It is in the imprecise sphere of affect that the seemingly incidental, intimate textures and details of everyday existence can be sensed, Stewart claims, and through which a more meaningful and truthful understanding of the quality of life at a specific moment in time and space can be perceived. Kathleen Stewart, *Ordinary Affects*, Duke University Press, London and Durham, 2007, p.2

6. A phrase coined by Nick Millar to describe small, distinctive and often overlooked features of a location.

7. The potential risk attached to open water bodies will influence the design of SuDS. SuDS can be considered as 'workplaces' under health and safety legislation (Clause 2.3, *Sewers for Scotland* 3rd Edition <http://www.scottishwater.co.uk/business/connections/connecting-your-property/sewers-for-scotland-and-suds>) and thus must meet specific design requirements. Designers are also required to attach corporate liabilities to their designs, which may foster a risk averse approach. Whilst there is no mandated requirement for perimeter fencing of SuDS, current industry guidance from CIRIA (*CIRIA SuDS Manual – Section 36.3*) recommends that 'where it is considered likely that unsupervised young children could gain access to the water, then a toddler proof fence 600-750mm high should be provided to prevent toddlers getting to the water but allow adult entry to step across when necessary. The fence must be a vertical pale type rather than horizontal rail construction which could be used as a climbing frame.'

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